DENVER AMENDMENT PROPOSAL FORM
FOR CPD INTERNAL PROPOSALS TO THE 2016 DENVER BUILDING CODE AMENDMENTS AND THE 2018 INTERNATIONAL CODES

2018 CODE DEVELOPMENT CYCLE

1) Name: Allen Yanong / Consolidated by Glenn Mathewson. Date: 3/26/2019

2) Proposals should be drafted in Word with the only formatting that is needed being BOLDING, STRIKEOUT AND UNDERLINING. Please do not provide additional formatting such as tabs, columns, etc.

Please use a separate form for each proposal submitted.

Is separate graphic file provided? ☐ Yes ☒ No

<table>
<thead>
<tr>
<th>Acronym</th>
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<tr>
<td>DBC- xxx</td>
<td>Denver Building Code– xxx code base</td>
<td>IMC</td>
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AMENDMENT PROPOSAL

Please provide all of the following items in your amendment proposal.

Code Sections/Tables/Figures Proposed for Revision:
DBC-IBC Section 1010, APPENDIX Q104, Q105
Note: If the proposal is for a new section, indicate (new).

Proposal:

Delete Denver amendment without substitution

SECTION 1010
DOORS, GATES AND TURNSTILES

Section 1010.1.9.6 Controlled egress doors in Groups I-1 and I-2 is amended by deleting Exception 2:

Section 1010.1.9.7 Delayed egress locks is deleted in its entirety and are addressed by IBCA Appendix Q, Access Control Systems.

Section 1010.1.9.8 Sensor release of electronically locked egress doors are addressed by IBCA Appendix Q, Access Control Systems.

Section 1010.1.9.9 Electromagnetically locked egress doors is deleted in its entirety and are addressed by IBCA Appendix Q, Access Control Systems.

Delete Denver amendment without substitution (note: highlighted sections will be retained and published in new Denver Policy)

SECTION Q104
ACCESS CONTROL SYSTEMS WITH ELECTROMAGNETIC LOCKS
Q 104.1. Access control systems with electromagnetic locks. Doors in all occupancies except Group II occupancies are permitted to be equipped with electromagnetic locks that prevent mechanical free egress when the electromagnetic locking system complies with all of the provisions of Section Q104. Electromagnetic locks that are part of a delayed egress system shall comply with the provisions of Section Q105. Electromagnetic locks that are used to secure an elevator lobby shall comply with all of the requirements of Section Q106.

Q 104.1.1 Fire alarm interface. Activation of the building fire alarm system, automatic sprinkler system, or fire detection system, if provided, shall directly unlock the doors, and the doors shall remain unlocked until the system has been reset.

Q 104.1.2 Loss of power. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.

Q 104.1.3 Electromagnetic lock power transfer. Power transfer from the door to the frame shall be listed and approved.

Q 104.1.4 Other locking devices. When electromagnetic locks are installed on a door, no other locking device shall be used on the door that prevents free egress.

Q 104.1.5 Door release hardware. The door shall unlock from the egress side using a combination of any two of the following means:

1. Door mounted release device. May be either of the following:
   a) Panic hardware release. Panic hardware may be used to unlock an electromagnetic lock, provided it is equipped with an internally mounted switch. Operation of the panic device shall simultaneously directly unlock the electromagnetic lock and allow the door to open with one motion. The switch shall have a proven operable life, as part of the exit device, equal to the listing requirements for the device (typically 250,000 cycles).
   b) Contact sense exit device release. This device shall directly unlock the electromagnetic lock.

2. Manual unlocking device. A manual, press to operate button may be used to unlock an electromagnetic lock when all the following conditions are met:
   a) The manual unlocking device is located in compliance with the requirements of ICC A117.1-2009 section 308.
   b) The manual unlocking device is located within five feet of either edge of the egress side of the door opening.
   c) The operable portion of the manual unlocking device shall have a minimum dimension of one inch (1”).
   d) The manual unlocking device shall be clearly identified by a sign that reads “EXIT” (or similar language) in minimum ¼” high letters on a contrasting background.
   e) The manual unlocking device shall directly unlock the electromagnetic lock.
   f) The manual unlocking device shall remain unlocked for a minimum of 30 seconds.

3. Motion detector release. The detector shall be arranged to detect an occupant approaching the doors from the egress side within a six-foot radius of the centerline of the door opening (refer to Figure Q104.1 for coverage patterns) and upon detection, shall directly unlock the electromagnetic lock and shall keep it unlocked for a minimum of 5 seconds. Loss of operating power to the detector shall directly unlock the electromagnetic lock.

Delete Denver amendment without substitution

SECTION Q 105
DELAyED EGRESS SYSTEMS

Q 105.1 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy, except Group A, E and H occupancies, in buildings that are equipped throughout with an automatic sprinkler system in accordance with IBC Section 907.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with DFC Section 907 as amended, provided that the doors are in accordance with Items 1 through 8 below.

- A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
- The doors shall unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
- The doors shall unlock upon loss of power to the controlling lock or lock mechanism.
- The doors shall unlock when the Electric Lock–Master Switch is in the unlocked position.
- A release device shall initiate an irreversible process that shall unlock the door within a delay period of not more than 15 seconds. The maximum required force and time to activate the release device shall not exceed 15 pounds (67 N) for 1 second. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door is unlocked by the application of force to the releasing device, relocking shall be by manual means only, at the door.
Exception:

Where approved, a delay period of not more than 30 seconds is permitted.

A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device:

6.1 For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS.
- DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2 For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS.
- DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3 The sign shall comply with the visual character requirements of ICC A117.1-09.

Emergency lighting shall be provided at the door.

The components for the delayed egress lock shall be listed as a complete assembly. Individual, listed components may not be field assembled to build a delayed egress locking assembly.

Note: Show the proposal using strikeout, underline format. At the beginning of each section, one of the following instruction lines are also needed:

• Revise as follows
• Add new text as follows
• Delete and substitute as follows
• Delete without substitution

Supporting Information:

SECTION Q104 ACCESS CONTROL SYSTEMS WITH ELECTROMAGNETIC LOCKS

Q104 Access Control Systems With Electromagnetic Locks. The 2018 IBC addresses electromagnetic locks in the following sections, 1010.1.9.9 and 1010.1.9.10. Previously, 2015 IBC Section 1010.1.9.9 read “Electromagnetically locked egress doors”. The 2018 IBC modifies that (via E 72-15) to read “Door hardware release of electrically locked egress doors” which means all types of electric locks will be covered by 2018 IBC 1010.1.9.10. This amendment can be deleted.

Q104.1.1 Fire alarm interface. 2018 IBC 1010.1.9.9 (5) & (6) address the requirement for doors to automatically unlock upon activation of the building fire alarm system, automatic sprinkler system or fire detection system. The lock shall remain unlocked until the fire alarm system has been reset. This amendment can be deleted.

Q104.1.2 Loss of power. 2018 IBC 1010.1.9.9 (3) address the requirement for the doors to automatically unlock upon loss of power. This amendment can be deleted.

Q104.1.3 Electromagnetic lock power transfer. There is no clear reference to power transfers in the 2018 IBC. See proposal to amend IBC 1010.1.9.9. It is recommended that this amendment be included in either a policy or an access control permitting guide.

Q104.1.4 Other locking devices. Per 2018 IBC 1010.1.9.6 unlatching of any door or leaf shall not require more than one operation. This implies that no other locking device shall be used on a door that prevents free egress since it would require more than once action. This amendment can be deleted.

Q104.1.5 Door release hardware (including subsections 1, 2, 3). 2018 IBC 1010.1.9.9. and 1010.1.9.9 provides requirements for sensor release or door hardware release of electrically locked egress doors. 2018 IBC 1010.1.9.9 mandates the use of both a sensor and a manual unlocking device. Alternatively, 1010.1.9.9 mandates that the operation of the door hardware directly interrupt the power to the electric lock and unlocks the door immediately. This amendment can be deleted.

Q104.1.6 Motion detector release. The 2018 IBC does not have any requirements for the coverage pattern for the motion detector release. This information along with Figure Q104.1 should be included in either a policy or an access control permitting guide. 2018 IBC 1010.1.9.9 (2) has provisions for the electric lock to unlock by loss of power to the sensor. This portion of the amendment can be deleted.
**SECTION Q105 DELAYED EGRESS SYSTEMS.** The 2018 IBC Sections 1010.1.9.8 and 1010.1.9.8.1 address all the requirements of Section Q105 and it is proposed that this section be removed from Appendix Q in its entirety.

**Q 105.1 Delayed egress locks.** 2018 IBC Section 1010.1.9.8. provides an equivalent description as to where delayed egress locks are permitted. Additionally, it allows the use of delayed egress for a specific condition of an E occupancy. It also provides an exception for use of delayed egress locks for courtrooms. The current Appendix Q amendment can be deleted.

Q 105.1 (1). 2018 IBC Section 1010.1.9.8.1 (5) addresses this amendment and provides two exceptions where two delayed egress systems are allowed on an egress path. The exceptions are limited to I occupancies.

Q 105.1 (2). 2018 IBC Section 1010.1.9.8.1 (1) addresses this amendment.

Q 105.1 (3). 2018 IBC Section 1010.1.9.8.1 (2) addresses this amendment.

Q 105.1 (4). 2018 IBC Section 1010.1.9.8.1 (3) addresses this amendment.

Q 105.1 (5). 2018 IBC Section 1010.1.9.8.1 (4) addresses this amendment, including the exception for the 30 second delay when approved.

Q 105.1 (6). 2018 IBC Section 1010.1.9.8.1 (6) addresses this amendment and includes an exception for the signs in Group I occupancies.

Q 105.1 (7). 2018 IBC Section 1010.1.9.8.1 (7) addresses this amendment.

Q 105.1 (8). 2018 IBC Section 1010.1.9.8.1 (8) addresses this amendment.

**Note:** The following items are required to be included:

Purpose: The proponent shall clearly state the purpose of the proposed amendment to physical, environmental and customary characteristics that are specific to the City and County of Denver (e.g., clarify the Code; revise outdated material; substitute new or revised material for physical, environmental and customary characteristics; add new requirements to the Code; delete current requirements, etc.)

Reasons: The proponent shall justify changing the current Code provisions, stating why the proposal is necessary to reflect physical, environmental and customary characteristics that are specific to the City and County of Denver. Proposals that add or delete requirements shall be supported by a logical explanation which clearly shows why the current does not reflect physical, environmental and customary characteristics that are specific to the City and County of Denver and explains how such proposals will improve the Code.

Substantiation: The proponent shall substantiate the proposed amendment based on technical information and substantiation. Substantiation provided which is reviewed and determined as not germane to the technical issues addressed in the proposed amendment shall be identified as such.

Bibliography (as needed): The proponent shall submit a bibliography when substantiating material is associated with the amendment proposal. The proponent shall make the substantiating materials available for review.

**Referenced Standards:**

Click or tap here to enter text.

*List any new referenced standards that are proposed to be referenced in the code.*

**Impact:**

None

**Note:** The proponent shall discuss the impact of the proposed amendment and indicate one of the following for each point below regarding the amendment proposal:

- The effect of the amendment proposal on the cost of construction; ☐ Increase ☐ Reduce ☒ No Effect
- The effect of the amendment proposal on the cost of design; ☐ Increase ☐ Reduce ☒ No Effect
- Is the amendment proposal more- or less-restrictive than the I-Codes; ☐ More ☐ Less ☒ Same

**Departmental Impact:**

None

**Note:** The proponent shall discuss the impact of the proposed amendment and indicate one of the following for each point below regarding the amendment proposal:

- The effect of the amendment proposal on the cost of review; ☐ Increase ☐ Reduce ☒ No Effect
| The effect of the amendment proposal on the cost of enforcement/inspection; □ Increase    □ Reduce    ☒ No Effect |